

DOCKET NO.: ABDT-0564/B030150
Application No.: 10/600,676
Office Action Dated: August 11, 2005

PATENT

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (currently amended) A method for forming a winding for a three-phase transformer, comprising:
 - winding an electrical conductor into a first plurality turns in side by side relationship to form a first layer of turns;
 - covering at least a portion of the first layer of turns with a layer of insulating material without end fill;
 - winding the electrical conductor into a second plurality turns in side by side relationship to form a second layer of turns that overlies the first layer of turns and the layer of insulation; and
 - at least one of bending the electrical conductor in a first direction away from an underlying surface over which the electrical conductor is wound, and a second direction substantially parallel to the underlying surface to form an offset in the electrical conductor at a transition in the electrical conductor between the first layer of turns and the second layer of turns, and securing the transition in the electrical conductor to at least one of the first plurality of turns, wherein the electrical conductor is one of:
 - wound into the first and second pluralities of turns over a winding leg of a core of the three-phase transformer; and or
 - wound into the first and second pluralities of turns over a mandrel and subsequently installed on the winding leg.

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2. (original) The method of claim 1, wherein securing the transition in the electrical conductor to at least one of the first plurality of turns comprises adhesively bonding the transition in the electrical conductor to the at least one of the first plurality of turns.

3. (original) The method of claim 1, wherein securing the transition in the electrical conductor to at least one of the first plurality of turns comprises tying the transition in the electrical conductor to at least one of the first plurality of turns.

4. (original) The method of claim 1, further comprising flattening the electrical conductor.

5. (original) The method of claim 1, wherein bending the electrical conductor to form an offset in the electrical conductor at a transition in the electrical conductor between the first layer of turns and the second layer of turns comprises bending the electrical conductor upwardly and laterally in relation to the first layer of turns so that a first of the second plurality of turns overlies a portion of the first layer of turns.

6. (original) The method of claim 1, wherein bending the electrical conductor to form an offset in the electrical conductor at a transition in the electrical conductor between the first layer of turns and the second layer of turns comprises bending the conductor so that an end of a last of the first plurality of turns is offset from a beginning of a first of the second plurality of turns.

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7. (original) The method of claim 1, wherein covering at least a portion of the first layer of turns with a layer of insulating material without end fill comprises placing a sheet of the insulation without end fill around the first layer of turns.

8. (original) The method of claim 1, wherein covering at least a portion of the first layer of turns with a layer of insulating material without end fill comprises covering the at least a portion of the first layer of turns with insulating material formed from paper.

9. (original) The method of claim 1, further comprising melting and curing adhesive on the layer of insulating material.

10-23. (canceled)

24. (new) A method for forming a winding for a three-phase transformer, comprising:

winding an electrical conductor over a surface of a winding leg or a mandrel to form a first layer of turns;

covering at least a portion of the first layer of turns with a layer of insulating material without end fill;

winding the electrical conductor into a second layer of turns that overlies the first layer of turns and the layer of insulation; and

bending the electrical conductor away from and parallel to the surface of the winding leg or the mandrel to form a transition between the first and second layers of turns.

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25. (new) The method of claim 24, further comprising securing the transition to at least one of the turns in the first layer of turns.

26. (new) The method of claim 25, wherein securing the transition to at least one of the turns in the first layer of turns comprises adhesively bonding the transition to at least one of the turns in the first layer of turns.

27. (new) The method of claim 25, wherein securing the transition to at least one of the turns in the first layer of turns comprises tying the transition to at least one of the turns in the first layer of turns.

28. (new) A method for forming a winding for a three-phase transformer, comprising:

winding an electrical conductor over a surface of a winding leg or a mandrel to from a first layer of turns;

covering at least a portion of the first layer of turns with a layer of insulating material without end fill;

winding the electrical conductor into a second layer of turns that overlies the first layer of turns and the layer of insulation; and

bending the electrical conductor in two directions.

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29. (new) The method of claim 28, wherein bending the electrical conductor in two directions comprises bending the electrical conductor to form a lateral and a vertical offset between an end of the first layer of turns and a beginning of the second layer of turns.

30. (new) The method of claim 29, further comprising adhesively bonding the portion of the conductor that forms the offset to at least one of the turns in the first layer of turns.

31. (new) The method of claim 29, further comprising tying the portion of the conductor that forms the offset to at least one of the turns in the first layer of turns.